towards a

sustainable environment

NOVA SCOTIA

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sustainable environment

June 2003

NOVA SCOTIA

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minister's message

Nova Scotia is a place of unique beauty, economic opportunity, and cultural vitality. We have a long tradition of working together for the common good. Those of us who live here are fortunate to have Nova Scotia as our home.

Our good fortune comes with a continuing responsibility—to protect and sustain the air, land, and water that is such an important part of our home.

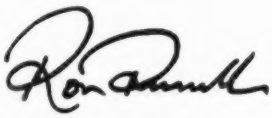
We have already had many successes in finding innovative ways to meet this responsibility. The challenges of the future demand that we continue to innovate. But innovation doesn't "just happen"—it grows from a clear vision and a planned approach.

This document contains our planned approach. It formalizes our commitment to sustainable environmental management for Nova Scotians. It strengthens and integrates existing initiatives that have the potential to bring true sustainability to our environment. It recognizes that Nova Scotia is home to unique ecological features that must be managed and protected.

Above all, it recognizes that protecting and sustaining our environment is essential to our health, our economy, and our collective well-being.

Managing the environment is a collective effort. The government may lead but all Nova Scotians must be full partners with us in a shared commitment to responsible stewardship. I invite you to share our vision for how that commitment can be turned into responsible actions for the future.

Sincerely,



Ronald S. Russell, CD
Minister of Environment and Labour

The Province of Nova Scotia's approach is based on the following principles:

•

Environmental protection is essential to the integrity of ecosystems, human health, and the socio-economic well being of society.

•

Managing the environment is a shared responsibility involving all citizens in Nova Scotia.

•

An integrated approach that addresses environmental, social, and economic considerations is the most effective way to deal with environmental issues.

1.0 introduction

The environment is important to Nova Scotians. More and more we recognize the link between healthy communities and a healthy environment. The province's diverse landscapes provide habitat for a wide range of flora and fauna. Its natural resources support key industries such as tourism, agriculture, fisheries, aquaculture, offshore oil and gas, forestry, and mining. Our natural environment is a major element of Nova Scotia's sought-after quality of life.

Maintaining a healthy environment for current and future generations requires the collaboration of citizens, organizations and businesses, and all levels of government. Using a balanced, coordinated approach, we can protect the health, prosperity, and environmental integrity of our communities. Individuals can conserve energy, choose environmentally responsible products, and modify their behavior. Organizations can develop environmental management plans, reduce emissions and waste from their operations, and adopt environmentally responsible practices. The government can continue to lead by administering legislation, establishing public policy, delivering programs and services, participating in regional, national, and international environmental initiatives, and managing its own operations responsibly.

Towards A Sustainable Environment outlines the Province of Nova Scotia's approach to managing the environment and establishes future directions. It is an approach that builds on our successes and improves our ability to deliver initiatives and programs. During the next year, we will develop a government-wide policy that further supports this approach and our on-going commitment to responsible environmental management.

Lessons of the Past *Nova Scotia is a land of contrasts, from the breathtaking highlands of Cape Breton Island, to the expansive sandy beaches of the south shore. Although we have a lot to be proud of, we also bear the burden of one of the largest contaminated sites in North America—the former Steel Plant and Coke Ovens site in industrial Cape Breton. Past practices have left a legacy of social, economic, and environmental costs. A successful approach to development must balance both costs and benefits.*

2.0 our environment

Our environment is complex, made up of interacting systems of water, air, land, organic and inorganic matter, and living organisms. What affects one often affects the others. For example, contaminants entering a watercourse can affect plant life, insects, fish, and eventually travel up the food chain to humans.

Nova Scotia is fortunate to have some 6700 lakes, 100 rivers, 7400 km of shoreline, and abundant supplies of ground water. Its watercourses provide Nova Scotians with a clean, safe, reliable supply of water to drink. They also provide recreational opportunities and spin-off economic benefits.

Nova Scotia's location places it in direct line with air pollution from the US mid-west, southern Ontario and Quebec, and New England. Much of Nova Scotia's air pollution originates from emissions in these jurisdictions. Illnesses such as asthma and cardiac disease are closely linked to poor air quality. Aquatic habitat has been significantly affected by acidification resulting from air pollution.

Emissions created by the burning of fossil fuels can affect air quality and are also known to be a major contributor to climate change. Climate change is a world-wide problem. Current models of climate change predict rising sea-levels, shifting rainfall patterns, altered growing seasons, and more frequent and severe weather disturbances within this century. Climate change will have environmental and economic impacts for Nova Scotia and the world. Given Nova Scotia's population concentration along the coastline, rising sea-levels are a significant concern.

The Kyoto Protocol *In 2002, Canada became the 100th country to ratify the Kyoto Protocol. The Province of Nova Scotia is committed to addressing climate change and supports the development of a fair and realistic national plan. The federal government has committed to reduce greenhouse gas emissions by 240 megatonnes by 2012. Although Nova Scotia's emissions represent less than 3 per cent of Canada's total, reaching this target will require significant effort from industry, government, and citizens.*

A large part of Nova Scotia is privately owned, with only 24 per cent of land owned by the provincial Crown. Approximately 20 per cent of provincial Crown land is currently protected by wilderness legislation. Remaining Crown lands are managed for a broad range of uses and values including forestry, recreation, wildlife, old growth, and tourism. The province's wilderness areas and Crown lands are managed to support natural processes, maintain biological diversity, and protect natural features. They also offer opportunities for wilderness recreation, environmental education, and research. Agriculture, forestry, tourism and other resource-based industries are economically important in Nova Scotia. These industries depend on a sustained supply of natural resources.

In addition to providing societal benefits, the natural environment has significant intrinsic value. Landscapes must be managed to ensure that nature and biodiversity are adequately maintained and that all values are considered. All species must have access to habitats that support healthy populations. Recognizing that biodiversity reaches beyond human requirements for a healthy environment, many government programs promote awareness of the intrinsic value of the environment.

Protected Areas are Growing *Nova Scotia ranks third in Canada for the amount of protected area representation, with over 8 per cent of the province protected. Recent activities to support the province's parks and protected areas system include:*

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acquisition and designation of McNab's/Lawlors Islands Provincial Park

•

designation of West Mabou Provincial Park

•

acquisition of Cape Split

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acquisition of private lands in western Nova Scotia from Bowater Mersey Paper Company in cooperation with the Nature Conservancy of Canada for addition to Wilderness Areas

•

acquisition of key private properties enclosed by Wilderness Areas

•

transfer of lands at Prospect High Head to the Nature Conservancy of Canada to anchor its protection initiatives in the area

•

partnerships with Ducks Unlimited, Wildlife Habitat Canada, the Nature Conservancy of Canada, Nova Scotia Nature Trust, and Kingsburg Coastal Conservancy to acquire ecologically significant lands including Frances Nose Island, lands at Martinique Game Sanctuary, and Gaff Point

•

acquisition of coastal property at Dunn's Beach

•

acceptance of significant coastal lands at Cole Harbour from the Kuhn and Nelson families

The Biodiversity Program *The Department of Natural Resources administers a biodiversity program, in partnership with other governments, non-government organizations, and the public. This program is responsible for the conservation and sustainable use of a large number of species of mammals, birds, insects, amphibians, reptiles, fish, and plants in the province as well as endangered or threatened species (Species at Risk).*

A Sustainable Community is "*a community that maintains, enhances, or improves its environmental, social, cultural, and economic resources in ways that support current and future community members in their pursuit of healthy, productive, and happy lives.*"

(Taken from the working definition of the Nova Scotia Government's Provincial Community Development Policy Initiative)

3.0 an integrated approach

The Province of Nova Scotia has developed strategies that support a healthy environment in areas including energy, forests, climate change, tourism, economic development, and drinking water. These and other provincial strategies reflect our commitment to the environment and provide tools for its protection. Going forward, we believe we must foster an ethic of continuous improvement to build on the foundation we have established.

Our strategies, programs, and commitments are all rooted in the belief that a healthy environment is essential and supports sustainable communities, improves health outcomes, and generates economic opportunities. To effectively address this complex interaction, all departments and agencies must work collaboratively. In some instances, this will require changes to the way government operates to improve the capacity to address issues in an integrated fashion.

Sustainable Communities

Nova Scotians value clean air, safe drinking water, and a good quality of life. People in communities across Nova Scotia are concerned about issues such as sustainable land use, sewage management, trans-boundary pollution, our individual and collective impact on the local environment, and our impact on the global environment. Communities want to have a voice in determining their future. The Province of Nova Scotia is working to improve its capacity to address issues that are identified by communities.

Sustainable Communities Initiative (SCI) *The SCI brings governments together to address community issues in an integrated manner. The provincial government's involvement in the SCI improves its ability to integrate social, cultural, economic, and environmental policies and programs. Through SCI we work with other levels of government, First Nations band councils, and communities to identify priority issues. The SCI is currently focused on two pilot areas: the Bras d'Or Lakes and the Annapolis River/Fundy Shore watersheds.*

Governments must improve their ability to work effectively together as they help communities to address their priorities. Through participation in the Sustainable Communities Initiative we are learning to work more effectively with communities and with other levels of government. As well, the provincial government is currently working to develop sustainable community indicators that will strengthen our ability to implement programs that directly benefit communities. Through these two initiatives we will increase our understanding of community needs and improve program delivery.

All sectors have a role to play in the stewardship of sustainable communities. We will encourage such participation through our programs and initiatives. The government will

- review barriers to private land conservation and identify options to increase the contribution of private landowners and land trusts to the provincial network of protected areas
- expand partnerships with the Nature Conservancy of Canada and the Nova Scotia Nature Trust to encourage stewardship and acquisition of additional critical lands for protection
- work with private land owners to incorporate conservation values into the working landscape and incorporate stakeholder input into management planning for protected areas and Crown lands
- endorse the designation of the South West Biosphere Reserve and participate as appropriate in research, monitoring, education, and training with respect to the conservation and sustainable use of resources

Our Canadian Heritage Rivers *The Margaree and the Shelburne Rivers are nationally recognized as Canadian Heritage Rivers. This non-regulatory, cooperative program is built on partnerships between local citizens, community groups, industry, and governments. On the Shelburne River, Bowater Mersey has committed to maintain natural and cultural values on their riverfront lands through Special Management Zones. On the Margaree River, citizens have formed the Margaree–Lake Ainslie Canadian Heritage River Society to implement priority projects such as tourism signage, water quality monitoring, and the collection of information on the rich cultural history of the river valley.*

an integrated approach

- promote pollution prevention approaches with all stakeholders
- promote stewardship approaches to protecting wetlands and other wildlife habitats
- promote nature recreation and active living through a number of programs designed to increase availability and use of "green" space
- continue to work with municipalities and industry to research and develop municipal land use controls and best management practices to protect water supply areas
- provide support to community partners through programs such as Habitat Conservation Fund, Species at Risk Conservation Fund, Nova Scotia Youth Conservation Corps, Adopt-A-Stream, and Adopt-A-Highway
- encourage product stewardship within the paint, tire, telecommunications, and dairy industries and continue to pursue stewardship agreements with other industries, such as the electronics industry
- work collaboratively with First Nations in Nova Scotia on environmental issues

Government Working with Communities

Natural Resources administers the Nova Scotia Habitat Conservation Fund through a board of directors that includes several community organizations. The fund assists partners to deliver programs for the protection and enhancement of wildlife and wildlife habitats. In 2002, the Fund distributed over $112,000 to community groups.

Tourism and Culture and other government departments are working with the communities of Joggins and Grand Pre to support their efforts to be designated as World Heritage Sites under the UNESCO World Heritage Site Program.

Environment and Labour has established the Tobeatic Advisory Group to develop a community-based management plan for the Tobeatic Wilderness Area. A facilitated, consensus-based approach is being used to consider the full range of stakeholder views and reach agreement on critical issues.

The Province of Nova Scotia worked closely with community members to find solutions for the PCB contamination in the Five Island Lake area. The Five Island Lake Community Liaison Committee provided input into difficult decisions and contributed to the remediation of North Bay and the removal of more than 6,800 tonnes of PCB-contaminated sediments.

Environment and Labour and the Town of Lunenburg are piloting a municipal program that promotes pollution prevention, water conservation, and protection of water resources. This three-year project is aimed at the town's businesses, residents, and school-aged children.

The Nova Scotia Youth Conservation Corps partners with community organizations on environmental projects that raise awareness, and encourage conservation and stewardship. These projects encourage community involvement in areas such as water conservation, proper septic tank maintenance, stream restoration, and environmental education.

Agriculture and Fisheries works with an array of organizations and school groups across Nova Scotia to raise awareness of conservation issues related to our agriculture and fisheries resources. Adopt-A-Stream is a program involving hundreds of volunteers in fish habitat restoration.

Natural Resources, in partnership with communities and non profit organizations, offers the "Parks are for People" program. Over 180 "green events" are carried out annually in parks, on Crown land, and in Wilderness Areas, providing high quality recreation experiences. These events also provide opportunities for exploration, understanding, and appreciation of our natural heritage.

The Big Picture – National and International Air Quality Initiatives

The provincial government is an active participant in a number of national and international air quality initiatives. These initiatives have set priorities and time-bound objectives. Implementation plans are in progress. Some examples include

Canada-wide standard on ground-level ozone (65 parts per billion by 2010) and particulate matter ($PM_{2.5}$ 30 µg/m³) • Canada-wide Acid Rain Strategy for Post 2000 • New England Governors and Eastern Canadian Premiers Acid Rain Action Plan, Mercury Action Plan, and Climate Change Action Plan • Canada – US Border Initiative on trans-boundary air quality issues • Canadian Air Quality Index improvement

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Human Health and Environmental Quality

Scientific research continues to provide information about the links between human health and environmental quality. Essential components of life—air, water, and food—provide potential pathways for contaminants to affect our health.

Exposure to pollutants through the contamination of air, water, and soil has been linked to various health conditions such as cancer, cardiac and respiratory illness, reproductive problems and birth defects, nervous system disorders, allergic reactions, hypersensitivity, and decreased resistance to disease.

In April 2002, the Physical Environment Committee of the Provincial Health Council released a report that recognizes the connections between the physical environment and human health. The report acknowledges that good environmental policy is also good for the fiscal and economic health of Nova Scotia. It also establishes indicators for air quality, water quality, and land quality. The Nova Scotia government's current priorities support continuous improvement in these areas.

Energy and the Environment *Nova Scotia's Energy Strategy,* Seizing the Opportunity (2001), *reflects the importance of the environment in all government planning in one of its three main goals: "to improve the province's environment and enhance the quality of life of Nova Scotians." The strategy establishes specific targets including*

• reduce sulphur dioxide (SO_2) emissions 25 per cent below the current cap by 2005 and 50 per cent in total emissions by 2010 • reduce nitrogen oxide (NO_x) emissions 20 per cent below 2000 levels by 2009 • reduce mercury (Hg) emissions 30 per cent by 2005 • implement national standards for particulate matter when they come into effect

The Province of Nova Scotia is committed to improving Nova Scotia's air quality. We will

- reduce emissions of sulphur dioxide, nitrogen oxide, and mercury through regulatory programs according to established targets and time frames
- participate in national and international initiatives that address trans-boundary air issues
- work to meet national standards for two primary components of smog: ground level ozone and particulate matter
- expand the ambient air monitoring program to improve air quality information throughout the province and distribute the information to Nova Scotians
- develop air-shed management plans and work with large industrial facilities to monitor transport and deposition from major sources

Clean, Safe Drinking Water *The provincial Drinking Water Strategy (2002) outlines a three-year action plan to conserve and protect Nova Scotia's drinking water through a three-step multiple barrier approach — source protection, proper water treatment and system operation, and regular monitoring and testing. An interdepartmental committee is overseeing the implementation of this strategy, as well as other water issues, in cooperation with municipalities across Nova Scotia.*

an integrated approach

The Province of Nova Scotia will continue to promote safe water for Nova Scotian communities through source protection, treatment, and testing in accordance with the Drinking Water Strategy for Nova Scotia. In addition, we will

- work with agriculture and fisheries sectors to address their water quality and quantity issues
- develop a framework for protection of water sources and aquatic habitat that builds on the drinking water strategy
- consult with the Municipal Public Works Association of Nova Scotia when developing guidelines, standards, and regulations for municipal water and wastewater issues
- use a government-wide approach to water issues through the Interdepartmental Drinking Water Management Committee
- expand and upgrade the ambient water monitoring system
- work with the Department of Health on issues related to contaminants in drinking water
- work with municipal partners to address wastewater issues
- provide funding support to municipalities for their water and wastewater infrastructure programs, and for land use planning in water supply areas

Watershed Management

The Department of Agriculture and Fisheries is addressing sustainable water management in the agriculture, fisheries, and aquaculture sectors of Nova Scotia. Its Water Management Strategy is designed to increase stakeholder appreciation for balancing resource development and environmental stewardship. The Department, in partnership with the Nova Scotia Federation of Agriculture and the agricultural industry, has established three Watershed Management Clubs with the following objectives:

- *to manage both water quantity and quality as a sustainable resource*
- *to ensure that agriculture's water use follows all federal and provincial statutes and regulations*
- *to ensure that all stakeholders are involved in the management of the watershed water resources*
- *to develop appropriate agricultural water management plans for the watershed and for individual farms within the watershed*

Municipal Infrastructure

Under the Canada – Nova Scotia Infrastructure Program (CNSIP), through the cooperation of all three levels of government, close to $116 million has been allocated since the fall of 2000 for improvements to over 82 municipal water and wastewater infrastructure projects. The province has contributed more than $37 million towards these projects and is expected to commit additional funding for similar "green" infrastructure projects over the next three years, until the CNSIP program ends in 2006. Under the Municipal Drinking Water Supply Planning Assistance Program and the Provincial Capital Assistance Program the province provided an additional $1 million for municipal water and wastewater initiatives in 2002-03 and will spend a similar amount in 2003-04.

Road Salt Management *The Nova Scotia Department of Transportation and Public Works applies approximately 280,000 tonnes of salt to Nova Scotia roads each winter. The department is developing a Salt Management Plan that will set out a policy and procedural framework for the continuous improvement of storing, handling, and applying road salt. Some initiatives include the construction of new salt storage facilities across Nova Scotia to minimize contamination of soil and water. Eighteen Road Weather Information Systems are in place, and five more are planned for 2003, to improve deployment procedures and provide for more efficient use of road salt.*

an integrated approach

Hazardous substances in water, air, and soil pose significant health risks. The government is committed to minimizing the environmental impacts of such materials and protecting Nova Scotians' health. We will

- promote pollution prevention
- apply risk-based management approaches to focus efforts where they are most needed
- modernize existing regulations controlling hazardous substances and eliminating regulatory duplication
- promote effective use, storage, treatment, and disposal of hazardous substances
- apply the "polluter pays" principle to users of hazardous substances
- promote stewardship by producers to encourage proper life-cycle management of hazardous substances
- work with other jurisdictions to improve rehabilitation of contaminated sites and promote sustainable redevelopment
- promote early detection and response to land quality issues through legislated requirements for mandatory reporting of site contamination

Responsible Growth and Environmental Protection

Since 1999, the Province of Nova Scotia has identified economic growth as a priority. In October 2000, the *Opportunities for Prosperity: A New Economic Growth Strategy* was introduced. A healthy environment and environmentally

Aquaculture Environmental Monitoring Program

The Aquaculture Association of Nova Scotia and the Department of Agriculture and Fisheries are collaborating on an environmental monitoring program for the marine aquaculture industry. A selected number of suspended finfish and shellfish aquaculture operations will be monitored for their environmental impacts. The results of these assessments will be used to develop mitigation strategies if necessary. Once the program is fully implemented, a report detailing the results will be prepared.

Environmental Farm Plan Program

The agriculture industry is proactively addressing on-farm environmental management through a partnership program between the Nova Scotia Federation of Agriculture and the Department of Agriculture and Fisheries. The Environmental Farm Plan Program includes on-farm environmental assessment targeting water use and management, farm waste management, manure storage and handling, fuel storage and handling, fertilizer, pesticide and soil management, and livestock production.

sound management practices contribute to economic prosperity. Resource and tourism industries are strengthened through responsible management of natural resources and natural spaces. Industry must meet international environmental standards to support trade and growth. There are many opportunities to decrease industry's operating costs through waste reduction, pollution prevention, and energy conservation. Environmental protection also reduces costs associated with health care and environmental remediation.

We are committed to applying the principles of sustainable development in delivery of our economic growth strategy. We will increase staff training to develop the knowledge and skills required to support industry application of these principles. This will allow us to more effectively balance economic, social, and environmental factors and to help Nova Scotia's industries to deliver goods and services in a manner consistent with the principles of sustainable development.

We will provide leadership by effectively managing regulatory programs, eliminating unnecessary barriers to responsible economic growth, and promoting sustainable resource management. Following are some of our priorities and future directions that illustrate the important linkages between economic prosperity and a healthy environment:

- promote innovation and trade within the environmental industries sector and model cost effective solutions to environmental challenges

Environment and Economy – Making the Links

Evidence of the link between a healthy environment and a strong economy is plentiful in Nova Scotia. Here are just a few examples:

The Solid Waste-Resource Management Strategy created hundreds of jobs within Enviro-Depots® and regional processing facilities. Monies collected from the beverage container program contribute nearly $9 million annually to municipalities and businesses to support solid waste diversion and value-added manufacturing in Nova Scotia.

A January 2003 study by the Atlantic Provinces Economic Council noted that nearly three quarters of the province's primary forest workers reside in rural areas, making it the most rural-based industry in the province. It also noted that the forest industry generated an estimated $1.55 billion in shipments outside the province in 2001. The Department of Natural Resources is working to ensure that forest management practices are in keeping with the commitment to maintain, protect, or enhance biodiversity and other forest values and uses.

In 2000, Nova Scotian environmental firms realized revenues of $310 million and employed 8,000 people. These environmental industries recorded the second largest growth in Canada.

The Eco-Efficiency Business Assistance Program is a new federal-provincial program launched in 2003. This program will demonstrate how becoming environmentally friendly can increase profitability of small and medium-sized businesses.

Promoting stewardship of Nova Scotia's natural environment has direct links to the continued sustainability and economic growth of Nova Scotia's $1.3 billion tourism industry. The Department of Tourism and Culture has invested significant effort and resources into promoting and positioning Nova Scotia as a pristine natural environment. Efforts have ranged from marketing and promotion, such as the 2003 Nature and Outdoor Lovers' Guide, *to tourism development activities that improve and capitalize on natural landscapes and tourism opportunities.*

Provincial Parks and Protected Areas contribute to Nova Scotia's economic prosperity. Parks, trails, and beaches alone attract approximately two million visitors annually, generating between $16 million and $32 million in direct and indirect expenditures.

Fish Plant Study and Innovative Solutions *The Atlantic Region National Programme of Action for the Protection of the Marine Environment from Land Based Sources of Pollution (NPA) Committee, in partnership with Environment Canada, Fisheries and Oceans Canada, the Atlantic provinces, and the fishing industry, are assessing the environmental impact of seafood processing effluents in the region. The results of the assessment could lead to revision of effluent discharge guidelines and remedial programs. This will be done in consultation with industry and other stakeholders. A complementary project called Innovative Solutions provides for cost benefit analyses of pollution prevention and control technologies, including value added product development.*

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- promote sustainable practices within the tourism industry by increasing the awareness of operators and visitors, developing "codes of conduct" and sustainable management principles, and recognizing operators who implement sound environmental practices
- create a regulatory climate that encourages the development of a renewable energy industry within the province
- strengthen the aquaculture sector's ability to deal with environmental issues and reduce risks as they pertain to resource development
- manage the commercial use of natural resources to ensure sustainability and to meet increasingly stringent environmental standards in export markets
- establish a Code of Forest Practice that will encourage practices contributing to sustainable forests
- provide up-to-date information on the condition of Nova Scotia's forests through the province's first State of Forests report
- manage Crown land to allow for multiple uses, to conserve special values, and to provide for sustainable management of renewable and non-renewable resources
- designate new Nature Reserves at Spinneys Heath, Great Barren and Quinan Lakes, and Quinns Meadow in Yarmouth County; Duncans Cove in Halifax County; and MacFarlane Woods in Inverness County
- explore opportunities to designate additional outstanding Nova Scotia rivers to the Canadian Heritage River Program
- continue to work towards a comprehensive system of protected areas

ClimAdapt was established in November 2001 as a collaborative effort to develop new expertise for adapting to climate change. It involves the private sector, non-government organizations, and all three levels of government. While efforts to slow climate change such as those under the Kyoto Protocol are important, it is also prudent to prepare to adapt to climate change. The focus of ClimAdapt has been to develop guidance specifically for the environmental assessment process.
As a result of this exercise, ClimAdapt members have developed new expertise that will help Nova Scotia better prepare for climate change. Their work is attracting attention across Canada and internationally. Some successes: ClimAdapt developed a guide for incorporating climate change into environmental impact assessment • Climadapt members secured adaptation-related contracts, which represents a new exportable service area.

an integrated approach

- designate two new candidate Wilderness Areas within the Crown land blocks at Gully Lake (Colchester/Pictou Counties) and Eigg Mountain/James River (Antigonish/Pictou Counties)
- collaborate with Agriculture and Agri-Food Canada and industry partners to establish common goals for air, water, soil, and biodiversity for the agricultural industry
- promote improved nutrient management planning, manure management, and on-farm water management within the agricultural sector
- improve sustainability of the agriculture industry through environmental management by implementing a federal/provincial Agriculture Policy Framework Agreement
- implement Nova Scotia's commitment under the New England Governors/Eastern Canadian Premiers Climate Change Action Plan
- assist the agri-food industry in its efforts to meet national climate change commitments
- develop a climate change impacts and adaptations action plan for government

Cooperation on Climate Change

Climate change is a significant global issue that requires a cooperative approach. In 2001, Nova Scotia released its Climate Change Strategy as part of the Provincial Energy Strategy. This strategy focuses on energy efficiency and substituting lower carbon fuels. Nova Scotia is also a partner in the Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP) Climate Change Action Plan. This plan sets out energy and emission goals for the region and identifies some key actions to address climate change on a regional scale.

Climate Change Adaptation Research

Research is a key tool to help the agriculture industry adapt to climate change and meet the objectives of Kyoto. The NS Agriculture College's Climate Change Program addresses the range of climate-related issues and looks for practical solutions to improve the management of soil, including soil-water risks, on-farm nutrient production, manure storage and handling, and construction of natural wetland systems.

Forest Code of Practice

The Department of Natural Resources is developing a Code of Forest Practice to provide direction to forest landowners and operators on forest management practices that lead to sustainable forests and forest use. It will establish key principles, describe how the principles can be implemented in practice, and provide technical references to assist in making operational decisions. The code will become part of planning and operational requirements for Nova Scotia Crown lands and will be encouraged on all private forest lands through information and education.

Province of Nova Scotia's Environmental Management Goals

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better integrate the environmental management initiatives of government

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support informed decision-making through access to accurate and timely environmental information

4.0 Provincial framework for environmental management

The Province of Nova Scotia is committed to building and maintaining a framework that supports a collaborative, integrated, and comprehensive approach to environmental management. Key elements include

- strengthening policy direction for environmental management
- leading by example
- working with stakeholders
- renewing legislation to meet current needs

Strengthening Policy Direction

The Province of Nova Scotia will develop a government-wide policy designed to better integrate environmental considerations into its policies, programs, and practices. It will encourage a coordinated approach to the management of environmental issues and reflect our environmental management goals. The policy will

- support continuous improvement in addressing environmental issues
- encourage consultation by providing guidance to departments on involving the public in major environmental initiatives

- *foster partnerships and a shared responsibility for environmental management*
- *improve the environmental efficiencies of government operations*
- *support and promote the principles of sustainable development*

- establish a process for coordinated reporting across government on environmental commitments and results achieved

Leading By Example

The Province of Nova Scotia is taking a leadership role by managing its own operations in an environmentally responsible manner. We are making progress in many areas and are committed to review and continuously improve our environmental performance. Transportation and Public works is implementing an Environmental Management System (EMS) in its highways operations. Environment and Labour is developing a pollution prevention plan. These are just two of the many activities that support efficient and effective environmental management within government. We will

- work towards ensuring that all provincially funded buildings exceed targets for the Model National Energy Code
- improve the energy efficiency of existing government buildings
- purchase green power
- adopt environmentally responsible—or green—procurement standards and consider opportunities to reduce and/or recover waste materials
- develop a "green" website that highlights achievements, models best practices, and links with environmental organizations

Model National Energy Code for Buildings *In 2001, with the release of its Energy Strategy the Province of Nova Scotia launched a government house-in-order program that sets targets for energy use within government buildings. The Department of Transportation and Public Works requires that, whenever possible, buildings constructed under its authority must exceed the targets for the Model National Energy Code for Buildings by 25 per cent. Currently eight new facilities, including seven schools, have been constructed to this standard. It is predicted that these facilities will result in a total greenhouse gas savings of over 2800 tonnes per year and annual energy cost savings of over $390,000. The government also encourages retrofit of existing buildings to reduce energy consumption. The Department of Energy delivers programs that support energy conservation by all sectors.*

Environmentally Responsible Procurement *The departments of Environment and Labour, Transportation and Public Works, and Energy are working co-operatively to develop environmentally responsible, or "green" procurement standards. The government spends over $400 million on goods and services annually. Through these expenditures the government can influence markets and trends and thereby promote "green" procurement within other sectors. In the future these departments will consider opportunities to recover waste materials, focus on waste reduction, and develop specifications for selected environmentally responsible goods and services.*

An Environmental Management System *The Department of Transportation and Public Works has implemented an Environmental Management System (EMS) for its Highway Operations. The EMS focuses on chemicals, waste, sewage systems, liquid bulk containment, erosion and sediment control, emissions, emergency and contingency plans, vegetation, energy, and water. The program is expected to provide benefits to the environment and reduce costs to the department.*

Empowered Homeowners *The Department of Environment and Labour is taking a pro-active approach to home-owner education regarding privately owned wells and on-site septic systems. A number of information pamphlets were produced that outline home-owner responsibilities – but getting the message out to those who needed to hear it was a challenge. An innovative partnership was established between the Realtors Association of Nova Scotia and the department to develop training modules for their sales agents. In this way, potential new home buyers receive information on proper maintenance of these important systems directly from their agent, and understand their responsibilities in ensuring that their on-site septic system continues to operate properly and their water is safe to drink.*

provincial framework for environmental management

Working With Stakeholders

In addition to managing its own activities, the Province of Nova Scotia encourages and facilitates the contributions of others through education, consultation, and partnerships. We will continue to aim environmental education programs at building the capacity of communities to address their local issues, while increasing awareness of broader environmental impacts. We will encourage youth to take leadership roles in developing and delivering environmental education programs within their communities.

Partnerships will continue to be an important part of doing business within government. We depend on the energy and expertise of many different sectors of society to overcome obstacles and achieve common goals. We will continue to work with all sectors to address the complex environmental issues.

Extending Our Reach The Environmental Education Partnership (EEP) is a partnership of organizations and agencies that advocate the delivery of effective and responsible environmental education to Nova Scotians. The EEP develops common environmental education messages, identifies joint opportunities for raising public awareness, and tracks and communicates environmental education programs and their outcomes. Founding partnership members include Clean Nova Scotia, The Nova Scotia Museum of Natural History (Department of Tourism and Culture), Environment Canada, Halifax Regional Municipality, and the Nova Scotia Department of Environment and Labour. The department also has Memorandum of Understanding with other organizations such as the Nova Scotia Environmental Network and the Atlantic Coastal Action Program-Cape Breton to promote environmental education.

Gulf of Maine Council on the Marine Environment The Gulf of Maine Council is a model for multi-jurisdictional cooperation and partnership. It provides a forum for information exchange and discussion of regional issues of concern. Nova Scotia, New Brunswick, Maine, Massachusetts, New Hampshire, and the federal governments of Canada and United States work together to foster stewardship of the Gulf of Maine and its resources. Some of the Council's achievements include the International Cooperation on Gulf Watch Program, the Gulf of Maine Times publication, and the Institute Without Walls (pilot school program).

Wetland and Waterfowl Conservation Efforts Under the Eastern Habitat Joint Venture, the Department of Natural Resources works with partners such as Ducks Unlimited and Wildlife Habitat Canada to acquire important wetland habitat, as was the case for Frances Nose Island. This work, together with other partnership projects such as the Black Duck Joint Venture and the Sea Duck Joint Venture, form part of Nova Scotia's commitment to wetland and waterfowl conservation under the North American Waterfowl Management Plan.

Sable Island Preservation Trust The Province of Nova Scotia provides funding and technical support to assist the Sable Island Presrvation Trust to manage and protect the quality of Sable Island and its unique ecosystem.

Improved Business Practices – Department of Environment and Labour *The Department of Environment and Labour administers the Environment Act and related regulations. Over the past several years the department has undertaken to review many of its business practices related to protection of the environment. Opportunities for increased efficiency and effectiveness have been identified. Examples of steps that are being taken to improve the department's ability to protect the environment include*

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apply a risk-based approach to environmental monitoring and compliance whereby facilities that present the greatest risk of non-compliance are inspected most frequently

provincial framework for environmental management

Environmental Legislation

The Environment Act provides the Minister of Environment and Labour with the mandate to protect the environment in Nova Scotia. The Act recognizes sustainable development and incorporates such concepts as pollution prevention, ecological value, precautionary principle, polluter-pay, and stewardship principles. In the fall 2003 legislative session, the government will introduce amendments designed to strengthen the Act and expand the range of environmental management and compliance tools available. As part of its legislative proposal, we will commit to periodic review of the Act to ensure that it remains responsive to current needs. Other environmental Acts and regulations currently under review include the: Beaches Act, Environmental Assessment Regulations, Special Places Protection Act.

- *develop standard terms and conditions for routine approvals issued by the department to improve turnaround time and ensure that key requirements are clearly and consistently stated*

- *review the Environmental Assessment Regulations and consider amendments that encourage use of cleaner fuels, encourage a risk assessment approach, and reduce red tape*

5.0 Conclusion

By definition, the environment is connected to everything in our lives. It is complex, made up of diverse interacting systems. Our interactions with the environment are also complex. Our health, economic prosperity, and way of life are all affected by the quality of our environment. We recognize its intrinsic value and the importance of natural spaces and biodiversity.

This complexity and pervasiveness drives the approach and philosophy of *Towards a Sustainable Environment*. The environment cannot be effectively managed and protected without the commitment of all stakeholders. Our approach acknowledges the responsibility of all departments, all levels of government, all sectors, all Nova Scotians.

The Province of Nova Scotia will lead by example, facilitate collaboration, and improve our framework for environmental management. The approach, as outlined, supports the progress we have made to date and enables continuous improvement.

It is our path to a healthy and sustainable future.

glossary of terms

Ambient monitoring: sampling and/or testing conditions in the surrounding environment.

Biodiversity: the variety, distribution, and abundance of different plants, animals, and microorganisms, the ecological functions they perform, and the genetic diversity they contain at local, regional, and landscape levels of analysis.

Development: advancement of the management and use of resources to satisfy human needs and improve the quality of human life.

Ecosystem: a community of interacting organisms, including non-living components upon which they depend.

Environment (Natural): the combination of climatic, physical, chemical, and biotic conditions that may affect the growth and welfare of an organism or group of organisms.

Nature Reserve: areas of land having unique, rare, or outstanding natural features that are protected under the Special Places Act.

Resource (Natural): encompasses renewable (continuously produced) resources such as forests, water, wildlife, and soils, and non-renewable (limited amount) resources such as coal, oil, and ores, all of which are natural assets.

Stewardship: caring for the land and associated resources so that healthy eco-systems can be sustained and passed on to future generations.

Sustainable: the ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustainable Development: development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development recognizes that the earth has limited space and resources or "carrying capacity" to support life. The World Conservation Strategy (1980) defined sustainable development this way: "...improving the quality of human life while living within the carrying capacity of supporting ecosystems."

Sustainable Environmental Management: managing the natural environment for its long-term use, development, and protection. Components can include conservation, sustainable development, and mitigation of environmental impacts.

Sustainable Resource Management (SRM): based on the principle of sustainable development. SRM for renewable resources refers to the management of these resources in a manner that will ensure their continued availability and quality. In regards to non-renewable resources, SRM refers to development and management that is the most efficient, competitive, and environmentally responsible. It involves using best practices during exploration, reclamation, use and eventual re-use, recycling, or disposal of the resource.

Water resources: all fresh and marine waters comprising all surface water, groundwater, and coastal water.

Watershed: an area of land from which surface water drains into a particular river, stream, or other body of water and includes, in this instance, the groundwater underlying the land and the estuary of the river. Watersheds are also called catchment areas, or drainage or river basins.

Wilderness Area: areas that are protected under the Wilderness Areas Protection Act that represent distinct landscapes and protect our wilderness heritage.

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